Assignment 6 PF

20k-0157

Task1

#include <stdio.h>

#include <stdlib.h>

/\* run this program using the console pauser or add your own getch, system("pause") or input loop \*/

int zellersrule(int date,int month,int year)

{

int F;

int m, a;

if (month == 1)

m = 11;

if (month == 2)

m = 12;

m = month - 2;

int C = (year / 100);

int D = (year % 100);

F = date+ (13 \* m) + D + (D / 4) + (C / 4) - (2 \* C);

if (F < 0)

a = ((F / 7) - 7);

a = F % 7;

return a;

}

void day(int F)

{

if (F == 6)

printf("Saturday");

else if (F == 0)

printf("Sunday");

else if (F == 1)

printf("Monday");

else if (F == 2)

printf("Tuesday");

else if (F == 3)

printf("Wednesday");

else if (F == 4)

printf("Thursday");

else if (F == 5)

printf("Friday");

}

int main(int argc, char \*argv[]) {

int date,month,year,c;

printf("Enter date: ");

scanf("%d",&date);

printf("Enter month: ");

scanf("%d",&month);

printf("Enter year: ");

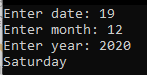
scanf("%d",&year);

c= zellersrule(date,month,year);

day(c);

return 0;

}



Task2

#include<stdio.h>

#include <conio.h>

#include <ctype.h>

void decrypt(char\* str, int key, int len) {

int j;

for (j = 0; j < len; j++) {

if (str[j] >= 'A' && str[j] <= 'Z') {

str[j] = tolower(str[j]);

}

else if (str[j] >= 'a' && str[j] <= 'z') {

str[j] = toupper(str[j]);

}

if (str[j] <= 90 && str[j] >= 65) {

if (str[j] > 64 && str[j] <= 67) {

str[j] = str[j] + 26;

}

str[j] -= key;

}

if (str[j] <= 122 && str[j] >= 90) {

if (str[j] > 96 && str[j] <= 99) {

str[j] = str[j] + 26;

}

str[j] -= key;

}

}

}

void encrypt(char\* str, int key, int len) {

int j;

for (j = 0; j < len; j++) {

if (str[j] >= 'A' && str[j] <= 'Z') {

str[j] = tolower(str[j]);

}

else if (str[j] >= 'a' && str[j] <= 'z') {

str[j] = toupper(str[j]);

}

if (str[j] <= 90 && str[j] >= 65) {

if (str[j] > 87 && str[j] <= 90) {

str[j] = str[j] - 26;

}

str[j] += key;

}

if (str[j] <= 122 && str[j] >= 97) {

if (str[j] > 119 && str[j] <= 122) {

str[j] = str[j] - 26;

}

str[j] += key;

}

}

}

int main()

{

int key;

char str[100];

printf("Input String:\n");

gets(str);

printf("Enter a key:\n");

scanf("%d",&key);

encrypt(str,key, strlen(str));

printf("String encrypted successfully \n");

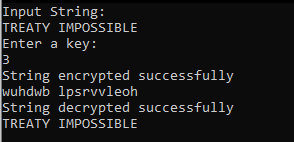
puts(str);

decrypt(str, key, strlen(str));

printf("String decrypted successfully \n");

puts(str);

}



Task3

#include<stdio.h>

#include<windows.h>

#include<stdlib.h>

#include<conio.h>

struct myDataType{

int i;

char ch;

}inputValue();

void run();

int check(char sym[9],char ch,int count);

struct myDataType inputValue(char sym[9],int count);

void Display(char sym[9]);

struct data

{

char name[10];

int age;

}player1,player2;

void main(){

printf("Enter Player1 Name; ");

scanf("%s",player1.name);

printf("Enter Age; ");

scanf("%d",&player1.age);

printf("Enter Player2 Name; ");

scanf("%s",player2.name);

printf("Enter age; ");

scanf("%d",&player2.age);

char reStart;

again:

run();

printf("\nIf You Want To Play Again Press 1: \nElse Press 2 :");

scanf("%s",&reStart);

if(reStart == '1')

{

system("cls");

goto again;

}

else

exit(0);

}

void run(){

int count = 0;

struct myDataType info;

char symbol[9] = {'1','2','3','4','5','6','7','8','9'};

Display(symbol);

again:

info = inputValue(symbol,count);

symbol[info.i] = info.ch;

system("cls");

Display(symbol);

if(check(symbol,info.ch,count)==1);

else{

count++;

goto again;

}

}

int check(char sym[9],char ch,int count){

FILE \*fp;

fp=fopen("matchhistory.txt","a");

int i;

for(i = 0;i<=6; i+=3)//it's for row

if(sym[i] == ch && sym[i+1]==ch && sym[i+2]==ch){

printf("the Winner is : %c",ch);

return 1;

}

for(i = 0;i<3; i++)//it's for column

if(sym[i]==ch && sym[i+3]==ch&&sym[i+6]==ch){

printf("the Winner is : %c",ch);

return 1;

}

if(sym[0]==ch && sym[4]==ch&&sym[8]==ch){

printf("the Winner is : %c",ch);

fprintf(fp,"the Winner is : %c",ch);

return 1;

}

else if(sym[2]==ch && sym[4]==ch && sym[6]==ch){

printf("the Winner is : %c",ch);

fprintf(fp,"the Winner is : %c",ch);

return 1;

}

else if(count==8){

printf("the Game is DRAW");

fprintf(fp,"the Game is a DRAW");

return 1;

}else return 0;

}

struct myDataType inputValue(char sym[9],int count){

char value;

int i;

struct myDataType info;

inputAgain:

if(count%2 == 0){

printf("\nEnter Your Choice X:");

}else{

printf("\nEnter Your Choice O:");

}

scanf("%s",&value);

for(i=0;i<9;i++){

if(value == sym[i]){

info.i = i;

if(count%2 == 0)

info.ch = 'X';

else

info.ch = 'O';

break;

}else{

info.i = -1;

info.ch = ' ';

}

}

if(info.i == -1){

printf("\nInput is not Valid");

goto inputAgain;

}

return info;

}

void Display(char sym[9]){

printf("\t\t\t\tT i c t a c t o e");

printf("\nPlayers 1 Symbol: X");

printf("\nPlayers 2 Symbol: O");

printf("\n\t\t\t | | ");

printf("\n\t\t\t %c | %c | %c ",sym[0],sym[1],sym[2]);

printf("\n\t\t\t-------|-------|-------");

printf("\n\t\t\t %c | %c | %c ",sym[3],sym[4],sym[5]);

printf("\n\t\t\t-------|-------|-------");

printf("\n\t\t\t %c | %c | %c ",sym[6],sym[7],sym[8]);

printf("\n\t\t\t | | ");

}

